

LISTING OF AND AMENDMENTS TO CLAIMS:

1. (currently amended) Apparatus (101) for determining a pulse position for a signal encoded by pulse modulation, the signal comprising a first component (PCS) and a second component (DCS), the apparatus comprising:

a determination unit (118) comprising a probability table (110) for providing a value (DDS) representative of the pulse position in response to receipt of at least one symbol of the first component (PCS) and at least one symbol of the second component (DCS), wherein the first component is a first received signal having a first signal quality measure and the second component is a second received signal having a second signal quality measure, said probability table being an asymmetric probability table when said first signal component has a better quality measure than said second signal component, and said probability table being a symmetric probability table when said first signal component has an equal quality measure to said second signal component.

2. (original) Apparatus according to claim 1 further comprising a first storage unit (102) for storing at least one symbol of the first component (PCS) and a second storage unit (104) for storing at least one symbol of the second component (DCS).

3. (original) Apparatus according to claim 1, wherein the pulse position (DDS) is the most-likely pulse position.

4. (canceled)
5. (currently amended) Apparatus according to claim 1, wherein the probability table (110) comprises an ~~asymmetric~~ table, ~~preferably~~ a diagonally asymmetric table.
6. (original) Apparatus according to claim 5, wherein in the case that the first component (PCS) shows a legal symbol then the second component (DCS) has no influence on the value.
7. (original) Apparatus according to claim 1, wherein the quality of the first component (PCS) is better than that of the second component (DCS).
8. (currently amended) Apparatus according to claim 1, wherein the probability table (110) comprises a ~~symmetric~~ table, ~~preferably~~ a diagonally symmetric table.
9. (original) Apparatus according to claim 1, wherein the probability table (110) comprises more than two dimensions.
10. (original) Apparatus according to claim 1, wherein the probability table (110) is storable in a memory (118), such as a read only memory (ROM) and/or a random access memory (RAM), and wherein two or more probability tables (110) are usable.
11. (currently amended) Apparatus according to claim 1, wherein the determination unit (118) derives the pulse position (DDS) by a prestored formula, preferably a probability based formula, whereby the at least one symbol of

the first component (PCS) and the at least one symbol of the second component (DCS) represent signal values for input to the formula.

12. (canceled)

13. (currently amended) Apparatus according to claim 25 [[12]], wherein the means (122) for detecting an illegal symbol are logic circuits (122) or an extension of the probability table (110).

14. (original) Apparatus according to claim 1, wherein the signal comprises an infrared signal.

15. (canceled)

16. (currently amended) A method for determining a pulse position for a signal encoded by a pulse modulation, the signal comprising a first component (PCS) and a second component (DCS), the method comprising the step of:

providing, via a probability table (110), a value (DDS) representative of the pulse position in response to receipt of at least one symbol of the first component (PCS) and at least one symbol of the second component (DCS), wherein the first component is a first received signal having a first signal quality measure and the second component is a second received signal having a second signal quality measure, said probability table being an asymmetric probability table when said first signal component has a better quality measure than said second signal component, and said probability table being a

symmetric probability table when said first signal component has an equal quality measure to said second signal component.

17. (currently amended) A method Method according to claim 16, further comprising the steps of storing at least one symbol of the first component (PCS) and storing at least one symbol of the second component (DCS).

Claims 18, 19, 20 and 21 (all canceled).

22. (currently amended) A computer program comprising program code means for performing, when said program is run on a computer, a method for determining a pulse position for a signal encoded by a pulse modulation, the signal comprising a first component (PCS) and a second component (DCS), the method comprising:

providing, via a probability table (110), a value (DDS) representative of the pulse position in response to receipt of at least one symbol of the first component (PCS) and at least one symbol of the second component (DCS), wherein the first component is a first received signal having a first signal quality measure and the second component is a second received signal having a second signal quality measure, said probability table being an asymmetric probability table when said first signal component has a better quality measure than said second signal component, and said probability table being a symmetric probability table when said first signal component has an equal quality measure to said second signal component.

23. (currently amended) A computer program product comprising program code means stored on a computer readable medium for performing, when said program is run on a computer, a method for determining a pulse position for a signal encoded by pulse modulation, the signal comprising a first component (PCS) and a second component (DCS), the method comprising:

providing, via a probability table (110), a value (DDS) representative of the pulse position in response to receipt of at least one symbol of the first component (PCS) and at least one symbol of the second component (DCS), wherein the first component is a first received signal having a first signal quality measure and the second component is a second received signal having a second signal quality measure, said probability table being an asymmetric probability table when said first signal component has a better quality measure than said second signal component, and said probability table being a symmetric probability table when said first signal component has an equal quality measure to said second signal component.

24. (new) Apparatus (101) for determining a pulse position for a signal encoded by pulse modulation, the signal comprising a first component (PCS) and a second component (DCS), the apparatus comprising:

a determination unit (118) comprising a probability table (110) for providing a value (DDS) representative of the pulse position in response to receipt of at least one symbol of the first component (PCS) and at least one symbol of the second component (DCS), wherein the probability table (110) is based on Bayes' probability.

25. (new) Apparatus (101) for determining a pulse position for a signal encoded by pulse modulation, the signal comprising a first component (PCS) and a second component (DCS), the apparatus comprising:

a determination unit (118) comprising a probability table (110) for providing a value (DDS) representative of the pulse position in response to receipt of at least one symbol of the first component (PCS) and at least one symbol of the second component (DCS), and

means for detecting an illegal symbol.

26. (new) Apparatus (101) for determining a pulse position for a signal encoded by pulse modulation, the signal comprising a first component (PCS) and a second component (DCS), the apparatus comprising:

a determination unit (118) comprising a probability table (110) for providing a value (DDS) representative of the pulse position in response to receipt of at least one symbol of the first component (PCS) and at least one symbol of the second component (DCS), wherein the pulse modulation comprises a four position pulse position modulation.